

2815

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: M. Nandakumar et al  
Serial No. 09/876,292  
Filed: 06/07/2001

Examiner: Edgardo Ortiz  
Art Unit: 2815  
Docket: TI-31089

For: ADDITIONAL n-TYPE LDD/POCKET IMPLANT FOR IMPROVING  
SHORT-CHANNEL NMOS ESD ROBUSTNESS

Commissioner for Patents  
P.O Box 1450  
Alexandria, VA 22313-1450

AMENDMENT - 37 CFR 1.115

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Responsive to the Office Action of September 23, 2003, favorable reconsideration and allowance of the application are respectfully requested in view of the following comments.

The rejection of claims 1-11 for double-patenting over the claims of U.S. 6,452,236 in view of Arimura et al is respectfully traversed, since the difference between the present claims and the claims of the '236 patent is not disclosed or suggested by Arimura et al. Note particularly that the additional subject matter of the present claims is illustrated in Fig 3 as p- regions 370 and 371; and in Fig 4 as p- regions 470 and 471. These regions have the same conductivity type as regions 314 and 315 (Fig 3); and regions 314a and 314b (Fig 4), respectively. But they have a resistivity at least one order of magnitude higher than 314, 315 and 314a, 314b, respectively. The purpose of the new regions is to increase the current gain of the parasitic lateral npn transistor, which leads to improved ESD robustness.

The device of Arimura et al does not have any such regions; nor any equivalent regions. Moreover, the device of Arimura et al does not have any region added for applicant's purpose, to improve ESD robustness. Because it does not have applicant's structure nor applicant's purpose, nor any equivalent structure or purpose, it cannot suggest applicant's invention.

Region 10 of Arimura et al, relied upon by the Examiner, does not have the location of applicant's new regions, nor the resistivity of applicant's new regions, nor the purpose or function of applicant's new regions. Note Arimura col 5, lines 9-10, stating that region 10 is a channel diffusion region added to suppress the short channel effect.

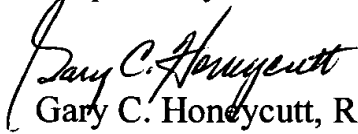
There is nothing in Arimura that would suggest applicant's new structure, nor applicant's purpose or function.

Region 15 of Arimura et al would appear to have a conductivity type and resistivity similar to applicant's new regions; but region 15 does not have the location nor the purpose or function required by applicant's invention. Therefore it cannot suggest applicant's invention.

For all the above reasons, the rejection is improper and should be withdrawn.

Applicant now believes the application is in condition for allowance.

Respectfully submitted,



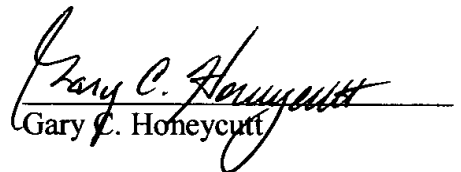
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972-470-0130

December 23, 2003

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I hereby certify that this correspondence is being deposited with the U.S. Postal Service in an envelope bearing first class postage, addressed to Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on this the 23<sup>rd</sup> day of December, 2003.

  
Gary C. Honeycutt